

## WHAT IS CLAIMED IS:

1. A temperature detection method of a printing apparatus which prints by using a printhead, comprising:

5 a storage step of storing, in a nonvolatile memory, a previous printing time when the printhead has performed printing operation;

a time acquisition step of acquiring a current time by using a timer which always performs time counting operation by power supply from an auxiliary power supply capable of supplying power independently of a main power supply that supplies power for performing printing operation by the printing apparatus;

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15 a calculation step of calculating a time elapsed after the previous printing time on the basis of the current time and the previous printing time;

a comparison step of comparing the elapsed time and a predetermined time;

20 a measurement step of measuring a temperature by using a sensor arranged in at least either of the printing apparatus and the printhead in accordance with the comparison result at said comparison step; and

an update step of updating a temperature on the basis of the measured temperature.

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2. The method according to claim 1, wherein the

temperature includes at least either of an environmental temperature of the printing apparatus and a temperature of the printhead.

5     3.     The method according to claim 1, wherein at said time acquisition step, a power-on time of the printing apparatus is acquired using the timer.

4.     The method according to claim 3, wherein at said  
10    calculation step, a time elapsed after power-on is calculated from the power-on time and the current time.

5.     The method according to claim 4, wherein the environmental temperature of the printing apparatus is  
15    corrected in accordance with the time elapsed after power-on.

6.     The method according to claim 1, further comprising a determination step of determining whether  
20    or not the printhead has been exchanged.

7.     The method according to claim 6, wherein a temperature correction value of the printhead is so controlled as to be updated in accordance with the  
25    determination result at said determination step.

8.     The method according to claim 1, wherein

the main power supply includes an AC power supply or a DC power supply, and

the auxiliary power supply includes a battery.

5 9. The method according to claim 1, wherein the printhead has a sensor for measuring a head temperature.

10 10. A printing apparatus which prints by using a printhead, comprising:

a nonvolatile memory which stores a previous printing time when said printhead has performed printing operation;

15 a timer which always performs time counting operation by power supply from an auxiliary power supply capable of supplying power independently of a main power supply that supplies power for performing printing operation by said printing apparatus;

20 time acquisition means for acquiring a current time by using said timer;

calculation means for calculating a time elapsed after the previous printing time on the basis of the current time acquired by said time acquisition means and the previous printing time stored in said  
25 nonvolatile memory;

comparison means for comparing the elapsed time and a predetermined time;

measurement means for measuring a temperature by using a sensor arranged in at least either of said printing apparatus and said printhead in accordance with the comparison result by said comparison means;

5 and

update means for updating a temperature on the basis of the measured temperature.

11. A temperature detection method of a printing  
10 apparatus which prints by using a printhead,  
comprising:

a storage step of storing, in a nonvolatile memory, a previous printing time when the printhead has performed printing operation;

15 a time acquisition step of acquiring an absolute current time;

a calculation step of calculating a time elapsed after the previous printing time on the basis of the absolute current time and the previous printing time;

20 a comparison step of comparing the elapsed time and a predetermined time;

a measurement step of measuring a temperature by using a sensor arranged in at least either of the printing apparatus and the printhead in accordance with  
25 the comparison result at said comparison step; and

an update step of updating a temperature on the basis of the measured temperature.

12. A printing apparatus which prints by using a printhead, comprising:

5 a nonvolatile memory which stores a previous printing time when the printhead has performed printing operation;

time acquisition means for acquiring an absolute current time;

10 calculation means for calculating a time elapsed after the previous printing time on the basis of the absolute current time acquired by said time acquisition means and the previous printing time stored in said nonvolatile memory;

15 comparison means for comparing the elapsed time and a predetermined time;

measurement means for measuring a temperature by using a sensor arranged in at least either of said printing apparatus and said printhead in accordance with a comparison result by said comparison means; and

20 update means for updating a temperature on the basis of the measured temperature.